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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/043,368 | 01/09/2002 | William D. Farwell | PD-01W025 | 6343 |

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PATENT DOCKET ADMINISTRATION
RAYTHEON SYSTEMS COMPANY
P.O. BOX 902 (E1/E150)
BLDG E1 M S E150
EL SEGUNDO, CA 90245-0902

EXAMINER

CHEN, TSE W

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2116

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/043,368 | FARWELL, WILLIAM D. | |
| | Examiner | Art Unit | |
| | Tse Chen | 2116 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-11, 13-17, 19-24, 26 and 27 is/are rejected.
- 7) ☒ Claim(s) 5, 12, 18 and 25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>01092002</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on September 9, 2002 was filed before the mailing date of the first Office Action. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Objections

2. Claims 2-7, 9-14, 16-20, and 22-27 are objected to because of the following informalities: “invention” is inappropriately used primarily because it does not correspond to the entity established in the referenced claim [i.e., system or method].

3. Claims 7 and 27 are objected to because of the following informalities: “said microcircuit” should be “said circuit” to correspond correctly with the established antecedent.

4. Claim 21 is objected to because of the following informalities: “providing a controller; said controller...” should not be separated by a semicolon and ended with a period. Suggested correction would be “providing a controller, said controller...;”.

5. Claims 23 and 25-26 are objected to because of the following informalities: the referenced claim number should be 21 instead of 22.

6. Appropriate correction is required.

Claim Rejections - 35 USC § 101

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

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8. Claims 2, 9, and 22 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The explicit definition of “actuating means” and “actuator” to be of “a ground crew” essentially stipulates that the claims do not require performance of the steps by a machine, such as a computer.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 1, 8, 15 and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Houston, US Patent 6483739.

11. In re claims 1 and 8, Houston discloses a system [fig.2] for controlling upsets [col.2, ll.1-39; provide higher voltage to better control upsets] comprising:

- Variable power supply means [208] for supplying power to a circuit [4t loadless storage cells].
- Controller means [202] for providing a first instruction [inherently, an instruction in the broadest interpretation is provided to switch from one voltage level to another] to said variable power supply means to increase the voltage supplied to said circuit when susceptibility to upsets is high [when active with cells being accessed] and a second instruction [inherently, an instruction in the broadest interpretation is provided to switch

from one voltage level to another] to decrease the voltage supplied to said circuit when susceptibility to upsets is low [when standby].

- Actuating means [204] for sending an actuating signal [reference voltage] to said controller means.

12. In re claim 15, Houston taught each and every limitation of the claim as discussed above in reference to claims 1 and 8. Claims 1 and 8 are directed to the system implementing the method of claim 15. Houston taught the system as set forth in claims 1 and 8. Therefore, Houston also taught the method as set forth in claim 15.

13. In re claim 21, Houston discloses a method of controlling upsets in a circuit [210; 4t loadless storage cells] [fig.2; col.2, ll.1-39; provide higher voltage to better control upsets] comprising the steps of:

- Providing a variable power supply [208].
- Connect the variable power supply to the circuit [fig.2].
- Providing a controller [202], said controller designed to provide a first instruction [inherently, an instruction in the broadest interpretation is provided to switch from one voltage level to another] to said variable power supply to increase the voltage supplied to said circuit when susceptibility to upsets is high [when active with cells being accessed] and a second instruction [inherently, an instruction in the broadest interpretation is provided to switch from one voltage level to another] to decrease the voltage supplied to said circuit when susceptibility to upsets is low [when standby].
- Connecting said controller to said variable power supply [fig.2].

- Providing an actuator [204] designed to send a signal [reference voltage] to said controller to cause said controller to provide said instructions.
- Sending said signal [sent to controller in order for voltage to be regulated].

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 3-4, 10-11, 17, and 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Houston as applied to claims 1, 8, 15, and 21 above, and further in view of Hanson et al., US Patent 5689175, hereinafter Hanson.

16. In re claims 3, 10, 17, and 23, Houston discloses each and every limitation of claims 1, 8, 15, and 21 as discussed above. Houston did not disclose explicitly that the actuating means is a pre-programmed clock.

17. Hanson discloses a system wherein the actuating means is a pre-programmed clock [43] [col.3, ll.33-46].

18. It would have been obvious to one of ordinary skill in the art, having the teachings of Houston and Hanson before him at the time the invention was made, to modify the system taught by Houston to include the actuating means taught by Hanson, in order to obtain the system wherein the actuating means is a pre-programmed clock. One of ordinary skill in the art would have been motivated to make such a combination as it provides a reliable and compact controller [regulator] [Hanson: col.11.17-35].

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19. As to claims 4, 11, and 24, Hanson discloses, wherein the pre-programmed clock is the system clock [43].

20. Claims 6, 13, 19, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Houston as applied to claims 1, 8, 15, and 21 above, and further in view of Takeda et al., US Publication 20020003653, hereinafter Takeda.

21. Houston discloses each and every limitation of claims 1, 8, 15, and 21 as discussed above. Houston did not disclose explicitly that the actuating means is an error rate monitor.

22. Takeda discloses a system wherein the actuating means is an error rate [52] monitor [0073-0074].

23. It would have been obvious to one of ordinary skill in the art, having the teachings of Houston and Takeda before him at the time the invention was made, to modify the system taught by Houston to include the actuating means taught by Takeda, in order to obtain the system wherein the actuating means is an error rate monitor. One of ordinary skill in the art would have been motivated to make such a combination as it provides a way to improve the quality of system output [Takeda: 0074].

24. Claims 7, 14, 20, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Houston as applied to claims 1, 8, 15, and 21 above, and further in view of Jang et al., US Patent 6301128, hereinafter Jang.

25. Houston discloses each and every limitation of claims 1, 8, 15, and 21 as discussed above. Houston did not discuss utilizing a variable frequency clock means to maintain power consumption at a constant.

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26. Jang discloses a system comprising a variable frequency clock means for regulating the clock rate [vco] of a load [e.g., circuit] whereby power consumption of the load is maintained constant [col.6, ll.19-66].

27. It would have been obvious to one of ordinary skill in the art, having the teachings of Houston and Jang before him at the time the invention was made, to modify the system taught by Houston to include the teachings of Jang, in order to obtain the system comprising a variable frequency clock means for regulating the clock rate of the circuit whereby power consumption of the circuit is maintained constant. One of ordinary skill in the art would have been motivated to make such a combination as it provides a way to supply power at a constant level [Jang: col.3, ll.25-34].

28. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Houston as applied to claim 15 above, and further in view of Okamoto et al., US Patent 6522078, hereinafter Okamoto.

29. Houston discloses each and every limitation of claim 15 as discussed above. Houston did not discuss varying the supply voltage by remote control.

30. Okamoto discloses a method wherein a supply voltage is varied by remote control [1a] [col.19, ll.18-26].

31. It would have been obvious to one of ordinary skill in the art, having the teachings of Houston and Okamoto before him at the time the invention was made, to modify the system taught by Houston to include the remote control of Okamoto, in order to obtain the method wherein the supply voltage is varied by remote control. One of ordinary skill in the art would

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have been motivated to make such a combination as it provides a way to better control power supply [Okamoto: col.1, ll.45-53].

Allowable Subject Matter

32. Claims 5, 12, 18, and 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

33. The following is a statement of reasons for the indication of allowable subject matter: the claim is allowable because none of the references cited, either alone or in combination discloses or renders obvious a system or method "wherein the actuating means is an ambient radiation monitor".

Conclusion

34. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The additionally cited U.S. patent documents describe various systems and methods associated with power control.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tse Chen whose telephone number is (571) 272-3672. The examiner can normally be reached on Monday - Friday 9AM - 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Browne can be reached on (571) 272-3670. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tse Chen
December 7, 2004


LYNNE H. BROWNE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600-2100